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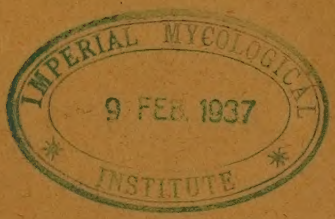

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INTERNATIONAL INSTITUTE OF AGRICULTURE

PLANT PROTECTION SECTION

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ROME – PRINTING OFFICE OF THE CHAMBER OF DEPUTIES

INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1937 No. 1

DISCOVERIES AND CURRENT EVENTS *

Egypt: Appearance of Antirrhinum Rust in the Country †

In the course of work on antirrhinum diseases in Egypt during the last few years, rust (*Puccinia antirrhini* Diet. and Holw.) was never found until it suddenly appeared around Cairo in November, 1936, attacking a wide range of commercial varieties. In early sown plants the attack has been so severe that the plants look as if they had been scorched and the majority was killed outright. Both uredo and teleuto stages have been seen.

It would be interesting to trace the path of this disease. It was first reported in America in 1895 and apparently took 27 years to reach the Bermuda Islands. Nine years later it appeared in Europe, being first reported in France in 1931. It then seems to have spread west to England (1933) and widely north and east into Northern and Central Europe (Holland, Denmark, Silesia, Czechoslovakia, and Germany, 1934). In 1935 it appears to have spread further east into Switzerland and south into Italy. During 1936 it seems to have again travelled south and east, crossing the Mediterranean, for it is now present on the borders of Africa and Asia. It would be useful to keep watch on the further spread of this interesting and serious disease.

Mozambique: Locust Movements (*Nomadacris septemfasciata* and *Locusta migratoria migratorioides*) §

During the month of August, 1936, no report has been received from the Nyassa province, which means that no swarms have made their appearance.

In the Zambezia province, a slight recrudescence in locust activity has taken place in the Quelimane district.

In the South of the Colony, a large swarm was observed towards the middle of the month, originating from the North of Cuijá, and which passed over Magudo

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from Dr. AMIN FIKRY, Plant Pathologist, Mycological Section, Ministry of Agriculture, Dokki, Egypt, transmitted by Dr. G. H. JONES, Director, Mycological Section.

§ Communication from Mr. JÚLIO GARDÉ ALFARO CARDOSO, Chief of the Entomological Section, Lourenço Marques, transmitted to the Institute by the 'Repartição Técnica de Agricultura' of the Colony.

and Moamba. Part of the swarm continued its route over Manhiça where it caused some damage, the remainder joined forces with another swarm which passed near Rossano Garcia and extended over the localities of Impamputo, Moveno and Umbeluzi where it effected some damage.

Towards the middle of the month, some swarms coming from the North-East crossed the frontier at Catuane continuing their flight to Zululand. At the end of month, a reverse movement occurred and a large swarm proceeded from Zululand to the Colony. Later, another swarm also traversed the frontier but continued towards the territory of Zululand.

Finally, according to our information and that obtained from the neighbouring countries, there is found to be a recrudescence in the activity of the red locust (*N. septemfasciata*).

The swarms which have been reported in the South of the Colony, appear to have proceeded from North and South Rhodesia where considerable movements have already been observed as seen from the relative communications.

Southern Rhodesia: Locust Invasion, 1932-1936 *

Monthly Report No. 47. October, 1936.

The number of swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.) reported to the Department has gradually diminished during the month and the great majority of reports have referred to the eastern and southern districts of the Colony.

Whilst a general movement to south and east has not been clearly apparent from the direction of flight indicated in reports, it would appear that the northern districts of the Colony have been gradually evacuated.

The most hopeful feature of the position is that no pre-breeding invasion by swarms from the north of the Zambesi has as yet occurred. In October, 1934, the Colony sustained a tremendous invasion from the north and even in 1935, swarms were more generally distributed in the Colony towards the end of October than they are at present.

The prospects for the coming hopper season, therefore, appear to have improved, but as the breeding season has tended to become later year by year during the present swarm cycle, it would be premature to take too optimistic a view of the position.

Some damage to crops and plantations has been reported from the eastern border. No evidence of disease or parasitation has been recorded, and bird enemies have apparently not been active.

* Communication from the official correspondent of the Institute, Mr. RUPERT W. JACK, F. E. S., Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

Uruguay: Locusts during the Period 1935-1936 *

In the month of June, 1935, the country was invaded by swarms of the South American locust (*Schistocerca paranensis*) coming from the Argentine Republic and Brazil and entering first the departments of Artigas, Salto, and Paysandú and shortly afterwards the departments of Florida, Durazno, Treinta y Tres, Rivera, Tacuarembó, Rio Negro, Soriano, San José, Flores, and Maldonado; towards the end of November, 1935, it may be said that almost the whole territory was invaded not only by swarms which appeared from the Argentine Republic entering from the west and occupying the departments on the coast and some in the interior but also by large swarms which invaded the north and east of our Republic coming from Brazil and, proceding towards the south, spread over the departments of Cerro Largo, Treinta y Tres, Florida, Minas, and Canelones. At the end of December the appearance of the locusts in the first larval stage (' mosquita ') may be said to have been general and, as in the previous campaigns, poisoned baits were used among other measures (' látigos ', flame throwers, etc.) with extremely satisfactory results.

Natural enemies which produce the death of the locusts in considerable numbers were observed, as in previous periods, attacking the adults and the eggs sometimes in a very large extent. Thus, in Salto was noted the presence of locusts attacked by the *Coccobacillus acridiorum*; in the same department, in Paysandú and others, *Trox suberosus* and *Mermis acridiorum* appeared; in Tacuarembó, Cerro Largo, and Treinta y Tres a quantity of eggs were found attacked by larvae of *Phorbia cilicrura* which destroys the egg-pods, and in the adults larvae of *Sarcophaga caridei* were observed.

In general, the locusts were well controlled and damage caused was slight, except in certain cases. In the month of November, 1935, a Law was passed authorising the expenditure of 50.000 ' pesos ' for the purpose of purchasing seeds to be given to farmers suffering from damage by locusts.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — By Circular of 2 September, 1936, modifying that of 18 April, 1936, relating to the use of preparations giving off phosphuretted hydrogen, in the control of corn weevil [see this *Bulletin*, 1936, No. 6, p. 124], it is established that persons applying for authorisation of the use of the phosphuretted hydrogen treatment, must produce a certificate issued by the Public Health authorities, testifying that they have the necessary physical and mental qualities.

Control of the use of phosphuretted hydrogen shall be exercised by the Police Authorities. The person in charge of disinfection operations must provide his staff with proper protecting masks. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. November 1936, Bd. VIII, Nr. 8, S. 180-181).

* Communication from the official correspondent of the Institute, Mr. AGUSTÍN TRUJILLO PELUFFO, 'Ingeniero Agrónomo', Chief of the 'Sección Fomento y Defensa Agrícola', 'Dirección de Agronomía', 'Ministerio de Industrias', Montevideo, Uruguay.

*** By Ministerial Disposition of 21 September, 1936, modifying the Decrees of 28 March, 1929 and 30 September, 1932 [see this *Bulletin*, 1929, No. 6, p. 83, and 1932, No. 12, p. 205] for the purpose of preventing the introduction of the carnation leaf roller [*Tortrix pronubana*], the importation of carnations (cut flowers) is authorised from 15 November instead of 30 November. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang November 1936, 16. Jahrg., Nr. 11, S. 111).

*** The Law of 30 September 1936 relating to the commerce of horticultural, vegetable and viticultural products establishes that these products may only be placed in commerce by the central Organisation ('Reichsstelle') instituted for this purpose by the Minister of Supplies and Agriculture. Early potatoes, cabbage, red cabbages, cauliflowers, kale and Brussels sprouts, tomatoes, bananas, oranges, lemons and pineapples must be placed at the disposition of this organisation. (*Ibid.*, S. 111-112).

*** The Ministerial Disposition of 21 October, 1936, establishes that on derogation of the Decree of 3 June, 1930, for the purpose of preventing the introduction of diseases of conifers [see this *Bulletin*, 1930, No. 10, p. 150], the dispositions of this Decree shall not apply to Christmas trees having no earth attached nor to branches of conifers imported as gifts to the exclusion of all commermercial purposes. (*Amtliche Pflanzenschutzbestimmungen*, 1. November 1936, S. 179).

Germany (Saar Territory). — By Decree of 23 September, 1936, for the purpose of preventing the spread of the Colorado beetle [*Leptinotarsa decemlineata*], the transportation from one district to another of potatoes, tomatoes, root vegetables (carrots, turnips, asparagus, horse-radish, celery, etc.), vegetables with their roots, onions and bulbs, rhizomes, leaves of potatoes and tomatoes, earth and farm manure has been restricted.

It is forbidden to export the above-mentioned products from regions considered as being infested or from protection zones.

It is also prohibited to transmit them from an infested district to protection zones or to any other part of the German territory. However, exceptions may be made for products proceeding from non-infested communes situated in infested districts.

The transmission of the above-mentioned products from a protection zone into a non-infested region is also forbidden. Nevertheless, this disposition is not applicable if the products are free from all particles of earth and if they are accompanied by a certificate issued by the representative of the Plant Protection Service, testifying that they are free from the Colorado beetle. The different packages or the trucks must carry the seal of the said Service.

Some still more detailed dispositions refer to the transmission of the abovementioned products to the interior of infested or protection areas. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. November, 1936. Bd. VIII, Nr. 8, S. 181-183).

*** By Notification of 15 October, 1936, relating to the application of the Decree summarised above, authority in the matter rests with the Plant Protection Service at Saarbrücken in respect of this district and with the directors of agricultural colleges for the other districts. (*Ibid.*, S. 183).

Argentine Republic. — By Decree No. 87.525 of 4 August, 1936, the price of living South American locusts [*Schistocerca paranensis*] purchased by the ' Dirección de Defensa Agrícola ' in the present campaign is established at 10 ' centavos ' per sack of thirty kilograms, free from extraneous matter.

The ' Dirección de Defensa Agrícola ' is also authorized to expend the sum of 10.000 ' pesos ' on salaries for temporary labour employed in the initial work of the present season. (*Boletín Oficial de la República Argentina*, Buenos Aires, 24 de septiembre de 1936, año XLIV, núm.12.669, págs. 1156 y 1157).

*** By Decree No. 89.054 of 26 August. 1936, the port of Posadas is authorised to allow of the entry of farm products proceeding from Paraguay and destined for local consumption. (*Ibid.*, 17 de octubre de 1936, núm. 12.688, págs. 864 y 865).

*** The Decree No. 89.213 of 28 August, 1936 authorises the National General Treasury to provide the ' Dirección de Administración ' of the Agricultural Department, as a preliminary part of the amount requested to the Congress, with the sum of 1.200.000 ' pesos ' for expenses in the control of the South American locust [*Schistocerca paranensis*] in the 1936-1937 campaign. (*Ibid.*, pág. 865).

Belgium. — By Ministerial Decree of 16 September, 1936, the importation into Belgium of peaches, nectarines included, and fresh apricots, originating in Spain, France and Italy, is not authorized unless the consignments are accompanied by a certificate from the Phytopathological Service of the importing country, testifying that these products have been recognized by the said Service as being free from ' ver ' (worm).

By ' ver ' is intended the larva of all fruit flies belonging to the family *Trypetidae*, as well as the larva of *Anarsia lineatella*, *Cydia molesta* and *Conotrachelus nenuphar*.

Notwithstanding the above-mentioned certificate, the Belgian Special Phytopathological Service may, however, whenever considered necessary, verify the sanitary condition of the said consignments.

Importation will only be possible through the customs houses of Antwerp (2nd, 3rd, and 4th office), Brussels (1st, 2nd, and 3rd office), and Haren-Aviation, Liége, Erquelinnes (station), Esschen (station), Montaleux (Mouscron), Mouscron (station), Montzen (station), and Quévy (station).

Consignments not accompanied by a certificate will be refused entry, unless on examination by the Belgian Special Phytopathological Service, made at the expense of the importers, it is found that the consignments are exempt from ' worm '. (*Moniteur belge*, Bruxelles, 2 octobre 1936, 106e année, nº 276, p. 6220-6221).

*** In order to prevent the spread of the Colorado beetle [*Leptinotarsa decemlineata*] and of wart disease [*Synchytrium endobioticum*], by Ministerial Decree of 21 September, 1936, the cultivation of potatoes, tomatoes and egg plants is forbidden in horticultural establishments under the control of the Special Phytopathological Service.

The attestation of inspection will be refused or withdrawn from the grower who does not conform to this disposition. (*Ibid.*, 7 octobre 1936, nº 281, p. 6323).

Brazil. — By 'Decreto legislativo' No. 14 of 2 July, 1936, the Convention concluded at Buenos Aires on 29 May, 1935, between Brazil and Argentina, for the purpose of facilitating the reciprocal visit of phytopathological experts, has been ratified. (*Diario Official*, [Rio de Janeiro], 4 de julho de 1936, anno LXXV, n. 155, pág. 14846).

Spain. — By 'Orden' of 3 November, 1936, the Official Chamber of Agriculture in Valencia shall, among its other specified functions, see to the organisation of collective action against field pests, according to the instructions given by the Official Centres, in agreement with the Provincial Agronomy Section. (*Gaceta de Madrid*, 4 noviembre 1936, año CCLXXV, tomo IV, núm. 309, pág. 638).

United States of America. — On 20 July, 1936, Notice of Quarantine No. 20, on account of the European pine shoot moth [*Rhyacionia buoliana*], promulgated on 1 March, 1915, and effective on 1 July, 1915 has been revoked. Such revocation is effective on and after 1 September, 1936. The entry of all pines from Europe thus automatically falls under the restrictions of Notice of Quarantine No. 37, the Nursery Stock, Plant, and Seed Quarantine. (United States Department of Agriculture. Bureau of Entomology and Plant Quarantine. *P. Q. C. A. — Q. 20*, [Washington], 1936, 1 p.).

*** With a view to eliminate infestations with one or more species of seed weevils (*Bruchus* spp.), it has been decided on 20 July, 1936, in accordance with the provisions of regulation 2, of the Rules and Regulations Supplemental to Notice of Quarantine No. 37, that the seeds of all species and varieties of *Lathyrus* and *Vicia* may be imported from any foreign country and locality, on and after 1 August, 1936, only under permit and upon the compliance with the provisions for the entry of tree and shrub seeds the importation of which is restricted by regulation 3 of the Regulations referred to above. (*Notice of Permit Requirement for the Entry of Seeds of Lathyrus and Vicia*, [Washington], 1936, 1 p.).

*** On 20 July, 1936, Notice of Quarantine No. 7, White-Pine Blister Rust [*Cronartium ribicola*], and its amendments nos. 1 and 2, promulgated on 21 May, 1913, 29 February, 1916, and 21 April, 1917, respectively, have been revoked. Such revocation is effective on and after 1 September, 1936.

The revocation of Quarantine No. 7 automatically places the entry into United States from Europe, Asia, Canada, and Newfoundland of white pines [*Pinus strobus*], currants and gooseberries [*Ribes* spp.] under the provisions of Notice of Quarantine No. 37, and under that quarantine their entry will be regulated in harmony with the restrictions of the Domestic White-Pine Blister Rust Quarantine No. 63. (*P. Q. C. A. — Q. 7*, [Washington], 1936, 1 p.).

*** Notice of Quarantine No. 60 (revised), Hawaiian and Puerto Rican Quarantine covering sand, soil, or earth, with plants, approved on 14 August, 1936, and effective on 1 September, 1936, makes provision for retention of potted plants on board vessels from Hawaii and Puerto Rico when evidence is presented satisfactory to the plant quarantine inspector that the soil about the plants has been so sterilized or otherwise treated that pest risk (*Phyllophaga* spp., *Phytalus* sp., *Adoretus* sp. and several species of termites or white ants, new to and not heretofore widely prevalent or distributed within and throughout the United States) is eliminated, that it is of such nature that there is no pest risk, or that the safeguards erected around such soil are adequate to preclude pest escape. (*B. E. P. Q. — Q. 60, revised*, [Washington], 1936, 2 pp.).

*** Amendement No. 1 to revised Rules and Regulations Supplemental to Notice of Quarantine No. 52, on account of the pink bollworm of cotton [*Platyedra gossypiella*], approved and effective on 17 August, 1936, modifies the area regulated under the pink bollworm quarantine regulations by bringing under restriction the counties of Cameron, Hidalgo, Starr, and Willacy, in the State of Texas. These counties are designated as lightly infested, due to the finding of pink bollworm infestation in gin trash at Brownsville and San Benito in Cameron County. Hidalgo, Starr, and Willacy Counties are included, since seed cotton is moved throughout these four counties for ginning without regard to county lines. (*B. E. P. Q. — Q. 52*, [Washington], 1936, 2 pp.).

Mexico. — By the second revised ' Cuarentena exterior ' No. 5, established for preventing the introduction of the Mediterranean fruit fly (*Ceratitis capitata*) and promulgated on 27 January, 1936, absolute quarantine is established against all types of soft pulp fruits and garden products originating from the following countries:— The Azores, Canary Islands, Portugal, Spain, France, Italy, Hungary, Greece, Malta, Cyprus, Turkey, Syria, Palestine; all the African Continent with its relative islands; Australia, Tasmania, New Zealand, Brazil, Argentina, Bermuda Islands, Hawaii.

The introduction into the country of the above-mentioned fruits and garden products shall only be authorized by special permission, when required for scientific research work and on taking all precautions as ordered by the respective Office.

Garden products such as onions, carrots, turnips, beetroots, etc., are not affected by this disposition, always provided that they come free from adhering particles of earth. (*Diario Oficial*, México, 18 de agosto de 1936, tomo XCVII, núm. 42, págs 3 y 4).

Nicaragua. — A Law of 5 August, 1936, grants a credit of 3,000 ' cordobas ' for the purpose of locust control. (*La Gaceta*, Managua, D. N., 26 de agosto de 1936, año XL, núm. 186. pág. 1658).

Peru. — By Resolution of 22 June, 1936, the sowing of cotton in the Nepeña valley, must commence on 15 May and termine definitely on 31 July of every year.

The pruning of the plants for obtaining the first shoot, must be effected between 15 July and 15 August, burning immediately the loppings and vegetative debris.

The lopping and burning of the shoots shall termine before 15 March.

The cultivation of secondary and later shoots is prohibited in the Nepeña valley.

The following weeds and those which will be periodically reported by the ' Dirección de Agricultura, Ganadería y Colonización ', are declared to be harmful to national agriculture as they act as hosts for ' arrebiatado ' (*Dysdercus ruficollis*) and the ' picudo ' [*Anthonomus vestitus*], their destruction by farmers, industrial and transport establishments and municipalities being compulsory. The said weeds are: *Sida paniculata* (' pichana ' or ' rabo de zorro '), *Malachra* sp. (' malva espinuda '), and *Malva hortensis* (' amapola '). (*Boletín de la Compañia Administradora del Guano*, Lima-Perú, octubre 1936, vol. XII, no. 10, págs. 411 y 412).

*** It having been verified that the Moquegua valley is not infested with fruit fly (*Anastrepha* sp.), by Supreme Resolution No. 82 of 25 July, 1936, the importation into the above-mentioned valley of all varieties of fruits, vegetables, plants and parts of living plants, flowers, etc., originating, in any region of the country or in foreign countries is prohibited, with the exception of those plants furnished by the ' Dirección de Agricultura y Ganadería ', for the improvement of vineyards and orchards in the said valley. (*El Peruano*, Diario Oficial, Lima, 7 de agosto de 1936, año 95, tomo II, trimestre III, no. 171, pág. 684).

*** By Supreme Resolution of 2 August, 1936, the regulation of Resolution No. 82 is approved. (*Ibid.*, págs. 684 y 685).

Salvador. — The Decree No. 133 of 29 September, 1936, modifying the present budget, provides, *inter alia*, a credit of 5.000 ' colones ' for the control of the ' chapulín ' [*Schistocerca paranensis*]. (*Diario Oficial*, San Salvador, 30 de septiembre de 1936, tomo 121, núm. 212, págs. 2891 a 2895).

Uruguay. — By Law of 18 September, 1936, the Executive Authorities are authorised to acquire by direct and immediate purchase 1 million kilos of barriers for the control of the South American locust [*Schistocerca paranensis*]. (*Diario Oficial de la República Oriental del Uruguay*, Montevideo, 14 de octubre de 1936, tomo 125, núm. 9043, pág. 70-A).

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[Contains:—
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Part I. The influence of borax top dressing on the boron status of soil, fruit and leaves, by H. O. Askew, E. Chittenden and R. H. K. Thomson.
Part II. The effect of tree injection of borax solutions on the boron status of apple trees, by H. O. Askew and E. Chittenden.
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